MODULE IX
BRA MISCELLANEOUS TREATMENT UNIT

IX.A. APPLICABILITY

All numeric values included in any of the conditions under IX.D., which are marked with an asterisk (*) are tentative and will be finalized through a permit modification after the compliance test results have been evaluated by the Executive Secretary in accordance with R315-8-15.5(c). The Executive Secretary reserves the right to replace these values with any that are determined to be more protective of human health and the environment. The Executive Secretary also reserves the right to require additional compliance test runs based on analysis of brines from different types of agents. The Executive Secretary also reserves the right to modify permit conditions based on the results of the compliance tests.

IX.A.1. Except as provided in Condition IX.A.1.d, the requirements of this module pertain to the miscellaneous treatment unit described in Attachment 15 (BRA Miscellaneous Treatment Unit) and designated below in Conditions IX.A.1.a through IX.A.1.c:

IX.A.1.a. Two Evaporator Packages, designated as BRA-EVAP-101 and 201, including the associated flash chambers, circulation pumps, and heat exchangers, all of which are located in the Brine Reduction Area (BRA) inside the Process and Utilities Building (PUB);

IX.A.1.b. Three Drum Dryers, designated as BRA-DDYR-101, 102, and 201, located in the Brine Reduction Area;

IX.A.1.c. One Pollution Abatement System (PAS), including the associated knockout box, gas burner, four baghouse modules, and blower and stack, designated as shown below, located in the BRA or outside the PUB:

Knockout Box	BRA-SEPA-105
Gas Burner	BRA-BURN-110
Baghouse Module	BRA-SEPA-101
Baghouse Module	BRA-SEPA-102
Baghouse Module	BRA-SEPA-103
Baghouse Module	BRA-SEPA-104
Exhaust Blower	BRA-BLOW-102
BRA PAS Stack	BRA-STAK-102

IX.A.1.d. Except for the closure requirements specified in Module II and Attachment 10 (Closure Plan), the requirements of this Permit do not apply to the equipment identified in IX.A.1.a through IX.A.1.c, if the BRA and BRA PAS have been partially closed as defined in IX.A.1.e.

IX.A.1.e. To partially close the BRA and BRA PAS, the Permittee shall complete the following tasks:

1. Notify the Executive Secretary of the intention to partially close the BRA and BRA PAS.
2. Drain the boilers and system piping and then dry the equipment by circulating hot air throughout the system.
3. Place chemical desiccant in boilers, deaerator, drum dryers, and strainers.
4. Close and secure all boiler openings and blind all connections.
5. Rod out and oil boiler fire tubes.
6. Install blinds in fuel gas lines to the BRA PAS, the boilers, and the PUB heater.
7. Remove all bags from the baghouse and manage as a hazardous waste.
8. Steam clean ductwork, the knockout box, and the baghouse modules.
9. Perform lockout/tagouts on pumps, deaerator, boilers, evaporators, and dryers.
10. Close and secure equipment and ductwork access hatches after cleaning is complete.
11. Remove dryer blades and close baghouse slide gates and knockout box discharge valves. Apply protective coating to dryer drums and wrap drums with wax paper.
12. Revise all affected RCRA drawings and submit to the Executive Secretary via a permit modification.

IX.A.1.f. To remove the BRA and BRA PAS from partial closure status and place these units back into active status, the Permittee shall complete the following tasks:

1. Notify the Executive Secretary of the intention to place the BRA and BRA PAS back into service 30 days prior to beginning steps 2 through 9 below.
2. Remove chemical desiccant from system equipment.
3. Remove wax paper from dryer drums and pressure wash drums to remove protective coating. Reinstall dryer blades.
4. Place bags on all baghouse modules.
5. Remove all blinds that were installed.
6. Remove all lockout/tagouts that were installed.
7. Perform a valve and switch line-up and a walkdown of the system P&IDs.
8. Revise affected RCRA drawings and submit to the Executive Secretary via a permit modification request, which notifies that the requirements of this condition have been satisfied and the BRA and BRA PAS are in active status.
9. Implement recommendations from engineering analysis performed in May of 1998 or demonstrate that the BRA and BRA PAS can meet the performance specifications in an approved BRA Compliance Test Plan.

IX.B ALLOWABLE WASTE FEED

IX.B.1. The Permittee may treat brine from the Brine Surge Tanks, which accept brine from the Liquid Incinerators, Metal Parts Furnace, and the Deactivation Furnace Pollution Abatement Systems (PAS).

IX.B.2. The Permittee may treat BRA decontamination solutions and brine that is regeneration waste from the water softener beds in the Water Treatment System.

IX.B.3. The Permittee may treat waste from the Brine Surge Tanks, which accept brines and salt residue from laboratory testing of brines and salt residue. Brine and salt residue used in laboratory testing may be combined with brine and added to the Brine Surge Tanks

through an existing tank port. Laboratory testing of brines and salt residue may include tests for agent concentration, corrosivity, specific gravity, metals, organics, PCBs, total dissolved/suspended solids, and free liquids.

IX.B.4. The Permittee may treat brine from the Brine Surge Tanks, which accept brine from the BRA sumps.

IX.B.5. The Permittee may treat brine from the Brine Surge Tanks, which accept brine recirculated from the Brine Surge Tank feed pumps and from the BRA evaporator packages.

IX.B.6. The Permittee may treat process water and cleaning solutions from operation and maintenance of the BRA miscellaneous treatment unit.

IX.B.7. The Permittee may treat brine from the Brine Surge Tanks, which accept the materials addressed in Module IV.F.1, including condensate from the BRA PAS stack.

IX.B.8. The Permittee is prohibited from treating waste in the miscellaneous treatment unit, identified in Condition IX.A.1., that is not identified in Conditions IX.B.1. through IX.B.7.

IX.C. IGNITABLE AND INCOMPATIBLE WASTES

IX.C.1. Ignitable or reactive wastes shall not be treated in the BRA/BRA PAS.

IX.C.2. The Permittee shall process brines from only one type of chemical agent at one time.

IX.C.3. The Permittee shall not place brine/salt residue in an unwashed container that previously held chemical agent or munitions containing chemical agent.

IX.D DESIGN AND OPERATING REQUIREMENTS

IX.D.1. The Permittee shall comply with the design and operating requirements specified in Attachment 15 (BRA Miscellaneous Treatment Unit) of the Permit.

IX.D.1.a. The Permittee shall not accept additional waste into the BRA evaporators when the BRA PAS baghouse is not on-line.

IX.D.1.b. The operating pressure of the brine circulation within the BRA evaporator shall be 15* to 25* psig.

IX.D.1.c. The brine feed rate from the BRA surge tanks to each BRA evaporator shall not exceed 30* gallons per minute.

IX.D.1.d. Brine fed from the BRA surge tanks to the BRA evaporator shall meet the following conditions:

1. Specific Gravity - 1* to 1.30*
2. pH - greater than 7*

3. Chemical agent shall be below 20 ppb for GB and VX, below 200 ppb for mustard

IX.D.1.e. Brine which contains PCBs above three ppb shall be sent off site to a facility permitted to treat and manage PCBs.

IX.D.1.f. Steam feed to the BRA drum dryers shall be maintained between 280*°F to 350*°F while brine is being fed to the drum dryers.

IX.D.1.g. The BRA drum dryers shall be rotating whenever brine is being fed to the drum dryers.

IX.D.1.h. The Permittee shall have at least two of the four baghouse modules on line in order to process waste in the BRA. If at any time less than two baghouse modules are on line, the Permittee shall immediately cease processing waste in the BRA.

IX.D.1.i. Gasses entering the BRA baghouse shall be maintained between 225*°F and 275*°F while waste is being processed in the BRA.

IX.D.2. The Permittee shall comply with the requirements specified in Attachment 9 (Contingency Plan) when there has been a release that threatens human health or the environment.

IX.D.3. If equipment in the BRA or BRA PAS shuts down, any brine being processed shall not remain in equipment or piping for longer than 24 hours.

IX.D.4. The sensors and interlocks identified in Attachment 15 (BRA Miscellaneous Treatment Unit) and Condition IX.D.4.a. shall be operating when the associated miscellaneous unit is operating.

IX.D.4.a. Brine shall be controlled in accordance with the notations associated with the instruments in the following table:

BRA & BRA PAS Automatic Waste Feed Cut Offs and Set Points		
Tag ID	**Description**	**Set Point**
23-FAHH-837	Brine feed from any BRA-TANK to BRA-EVAP-101 High-High	30* gal/min[1]
23-FAHH-835	Brine feed from any BRA-TANK to BRA-EVAP-201 High-High	30* gal/min[1]
23-LAHH-757	BRA-EVAP-101 Brine Level High-High	85* in w.c.
23-LAHH-720	BRA-EVAP-201 Brine Level High-High	85* in w.c.
23-FAHH-851	Brine feed to BRA-DDYR-101 High-High	12* gal/min[2]
23-FAHH-872	Brine feed to BRA-DDYR-102 High-High	12* gal/min[2]
23-FAHH-903	Brine feed to BRA-DDYR-201 High-High	12* gal/min[2]
23-LAHH-758	BRA-DDYR-101 Brine Level High-High	10* inches (height)[2]
23-LAHH-759	BRA-DDYR-102 Brine Level High-High	10* inches (height)[2]
23-LAHH-760	BRA-DDYR-201 Brine Level High-High	10* inches (height)[2]
27-TSH-172	BRA PAS Pre-Baghouse Exhaust Gas Temperature High	275* °F[3]
27-PDSLL-143	BRA PAS Baghouse BRA-SEPA-101 Differential Pressure Low-Low	1.0* in. WC[4,5]
27-PDSLL-144	BRA PAS Baghouse BRA-SEPA-102 Differential Pressure Low-Low	1.0* in. WC[4,5]
27-PDSLL-145	BRA PAS Baghouse BRA-SEPA-103 Differential Pressure Low-Low	1.0* in. WC[4,5]
27-PDSLL-186	BRA PAS Baghouse BRA-SEPA-104 Differential Pressure Low-Low	1.0* in. WC[4,5]

[1] Stops feed from selected BRA-TANK to BRA-EVAPs.
[2] Stops feed to affected BRA-DDYR.
[3] Stops feed to all BRA-DDYRs. Circulation within the evaporator continues.
[4] For one or two BRA-SEPA in alarm the corresponding dampers close. At least two modules will be on line for operation.
[5] For more than two BRA-SEPAs in alarm, feed stops to all BRA-DDYRs. Circulation within the evaporator continues.

IX.D.4.b. The Permittee shall not restart the BRA until the problem causing the interlock or waste feed cut-off has been corrected. Waste feed cut-offs and equipment interlocks shall be documented in the facility Operating Record.

IX.D.5. Wastes exiting the miscellaneous treatment unit described in Condition IX.A shall be considered to be newly generated waste subject to regulation under R315 and 40 CFR.

IX.D.6. The Permittee shall comply with the applicable requirements for piping found in R315-8-10 [40 CFR 264, Subpart J], for all brine piping associated with the Brine Reduction Area.

IX.D.7. **Compliance Test**

IX.D.7.a. Shakedown Period

IX.D.7.a.i. The shakedown period shall not exceed 720 hours of operation. The Permittee may petition the Executive Secretary for one extension of the shakedown period for up to 720 additional hours in accordance with R315-8-15.5(c)(1).

IX.D.7.b. Conformity to Test Plans

IX.D.7.b.i. The Permittee shall operate and monitor the BRA during the test runs as specified in the Compliance Test Plan.

IX.D.7.c. Compliance Test Run Data Submissions and Certifications

IX.D.7.c.i. The Permittee shall submit to the Executive Secretary a test run report within 90 calendar days of completion of the test run. All submissions shall be certified in accordance with R315-3-2.2.

IX.D.7.c.ii. If the preliminary calculations show that one or more of the performance standards listed in the test plan failed during the test run, the Permittee shall immediately stop waste feed to the BRA. The Executive Secretary shall be orally notified within 24 hours of this discovery. As necessary, a revised post-test feed rate can be approved by the Executive Secretary to dispose of the hazardous waste present in the tank systems during this discovery.

IX.E DETECTION AND MONITORING REQUIREMENTS

IX.E.1. As described in Attachment 15 (BRA Miscellaneous Treatment Unit), the Permittee shall monitor the waste processed in the miscellaneous treatment unit by use of the local control panel and the Process Data Acquisition and Recording System (PDARS).

IX.E.2. The Permittee shall follow the inspection requirements for the equipment/processing associated with the miscellaneous treatment unit as specified in Attachment 5 (Inspection Plan).

IX.F. CLOSURE

IX.F.1. At closure, the Permittee shall follow the procedures specified in the Attachment 10 (Closure Plan).